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*AC 4/12/05***Total Number Of Pages Including Cover Page 5****FAX TO**

Name	Company	Fax Number	Phone Number
Examiner Lavarias	USPTO - Art Unit 2872	(571) 273-2315	

Original will follow via: ☐ Regular Mail ☐ Overnight Delivery ☐ Messenger ☒ None

NOTES:

U.S. Patent Application No. 10/646,291 entitled "Prism Assembly with Cholesteric Reflectors"

Examiner Lavarias,

The attached are my proposed amendments for your review in preparation for our interview scheduled for tomorrow 12 PM EDT / 9 AM PDT.

Thanks, John C

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Attorney's Docket No. 356508.01501

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:
Arthur Berman

Examiner: Lavarias, Arnel C.

For: PRISM ASSEMBLY WITH
CHOLESTERIC REFLECTORS

Group Art Unit: 2872

Serial No.: 10/646,291

Filed: August 22, 2003

OK
5. (Currently amended) ~~The prism assembly according to Claim 3,~~ A prism assembly, comprising:

an input beam splitter comprising an input face, a first exit face, and a second exit face;

a processing beam splitter comprising an input face and an exit face, wherein the input face of the processing beam splitter is coupled to the first exit face of the input beam splitter;

a cholesteric based beam splitter comprising an input face and an exit face, wherein the input face of the cholesteric based beam splitter is coupled to the second exit face of the input beam splitter; and

an output beam splitter having a first input face, a second input face, and an output face, wherein the first input face of the output beam splitter is coupled to the exit face of the processing beam splitter and the second input face of the output beam splitter is coupled to the exit face of the cholesteric beam splitter

wherein:

the cholesteric beam splitter comprises a dual cholesteric layer configured to,

direct a first part of a light beam entering the input face of the cholesteric based beam splitter to a first processing face of the cholesteric beam splitter,

direct a second part of the light beam entering the input face of the cholesteric based beam splitter to a second processing face of the cholesteric beam splitter, and

direct light beams emanating from the first and second processing faces to the exit face of the cholesteric based beam splitter.

OK 12. (Currently amended) ~~The prism assembly according to Claim 10, A~~
prism assembly, comprising:

an input beam splitter comprising an input face, a first exit face, and a second exit face;

a processing beam splitter comprising an input face and an exit face, wherein the input face of the processing beam splitter is coupled to the first exit face of the input beam splitter;

a cholesteric based beam splitter comprising an input face and an exit face, wherein the input face of the cholesteric based beam splitter is coupled to the second exit face of the input beam splitter; and

an output beam splitter having a first input face, a second input face, and an output face, wherein the first input face of the output beam splitter is coupled to the exit face of the processing beam splitter and the second input face of the output beam splitter is coupled to the exit face of the cholesteric beam splitter

wherein:

the cholesteric based beam splitter comprises a beam splitting component comprising two cholesteric layers; and

the cholesteric layers comprises a blue cholesteric for directing blue light to a first processing face of the cholesteric based beam splitter and a red cholesteric for directing red light to a second processing face of the cholesteric based beam splitter.

Cholesteric N/S

71. (New) A prism assembly, comprising:
 a cholesteric layer configured to,
 reflect a first color and polarization of an input light toward a first modulating device,
 pass a second color and polarization of the input light toward a second modulating device,
 pass modulated light emanating from the first modulating device toward an output; and
 reflect modulated light emanating from the second modulating device toward the output.

*Cholesteric?**Cholesteric N/S*

82. (New) A modulator, comprising:
 a beam splitter comprising an input face, and output face, a first processing face, and a second processing face; and a beam splitting layer;
displays? a first reflective modulating device attached to the first processing face; and
a second reflective modulating device attached to the second modulating face;
introduced herein

wherein:

the beam splitting layer comprises,

a first cholesteric layer that, reflects a portion of light entering the modulator from the input face toward the first processing face, and passes modulated light from the first reflective modulating device toward the output face, and

a second cholesteric layer that, passes a second portion of light entering the modulator from the input face toward the second modulating face, passes the modulated light from the first reflective modulating device toward the output face, and reflects modulated light from the second reflective modulating device toward the output face.

86. (New) A prism assembly, comprising:
an input PBS positioned to split input light into first and second light beams;
a processing PBS and a first modulating device configured to modulate the first light beam with first color data;
a cholesteric based beam splitter configured to direct a first part of the second light beam toward a second modulating device and a second part of the second light beam toward a third modulating device, where the second and third modulating devices are configured to modulate the second light beam with second and third color data; and
an output PBS configured to recombine the first and second modulated light beams.

87. (New) A quad style prism assembly, comprising:
a prism assembly divided into 4 equal sized quadrants, each quadrant comprising a pathlength matched beam splitter; *orig. prs?*
the first quadrant comprising an input beam splitter positioned to split input light into first and second light beams;
the second quadrant comprising a processing PBS and a modulating device configured to modulate the first light beam with a first color;
the third quadrant comprising a cholesteric based beam splitter and second and third modulating devices configured to modulate the second light beam with second and third colors; and
the fourth quadrant comprising an output PBS configured to recombine the modulated light beams.